

## ABSTRACT

An architectural sound enhancement system is provided for installation in a space having a suspended ceiling to provide integrated masking, background, and paging functions. The system includes an array of flat panel speaker units, a central paging transmitter, and a wireless remote control unit. The speaker units are adapted to be installed in a selected location within a suspended ceiling grid and can be moved to a new location as needed and desired. Each speaker unit is self-contained and includes, in one embodiment, an electronics module housing a system controller with radio frequency detection capability, a sound generator having a library of stored sounds, an audio effects processor including an equalizer, a sound enhancer, an audio pre-amplifier, an audio power amplifier, and a flat panel speaker. The system controller is adapted to receive control signals from the remote control unit and to control the volume and equalization of the speaker unit as well as to select sounds from the sound library for reproduction and to upload new sounds from the remote control unit to the library. Paging announcements are transmitted wirelessly from the central paging transmitter and received by selected ones of the speaker units for broadcasting a page or other audio message.